



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Anastasios Melis et al )

Atty Dkt. No. 99-29 #22

Serial No. : 09/748,690 )

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Group Art: 1651

Title: HYDROGEN PRODUCTION USING )  
HYDROGENASE-CONTAINING )  
OXYGENIC PHOTOSYNTHETIC )  
ORGANISMS )

Examiner: V. Afremova

PRELIMINARY AMENDMENT

RECEIVED  
OCT 18 2004  
OFFICE OF PETITIONS

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
MS/DAC  
Alexandria, VA 22313-1450

Sir:

In advance of prosecution, and before this application is taken up for examination on the merits, please amend the claims as follows:

IN THE CLAIMS:

1. (Currently Amended) A reversible physiological process for temporal separation of oxygen evolution to avoid deactivation of hydrogenase in the presence of oxygen and sustain photosynthetic hydrogen production in cells of an algae microorganism, comprising:

(a) growing a culture of cells of algae microorganism photoheterotrophically in a Tris-acetate-phosphate medium under illuminated white fluorescence illumination conditions to accumulate an endogenous substrate;